

# M37515T-PTC

Converter Board for Connecting 64-core Flexible Board FLX64 or M3T-64DIP-DMS to 48-pin 0.5mm pitch LQFP for 7515 and 7516 Groups

## User's Manual

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### CAUTION

If the requirements shown in the "CAUTION" sentences are ignored, the equipment may cause personal injury or damage to the products.

## 1. Description

This product converts the 64-pin LCC package (64D0) for 7515 and 7516 Group MCUs to the pin assignments of the 48-pin 0.5mm pitch LQFP package (PLQP0048KB-A), and connects the emulator and target.

## 2. Package Components (see Figure 1)

- (1) M37515T-PTC converter board
- (2) TQSOCKET048SDP
- (3) TQPACK048SD
- (4) M37515T-PTC Instruction Manual (this manual)

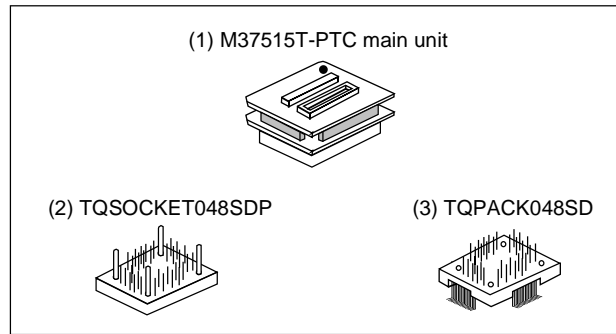


Figure 1 Package components of M37515T-PTC

## 3. Specifications

Table 1 Specifications

| Item                                      | Description   |
|---|---|
| Package                                   | PLQP0048KB-A (formerly: 48P6Q-A)<br>(48-pin 0.5mm pitch LQFP) |
| Insertion/removal iterations of connector | 20 times guaranteed   |

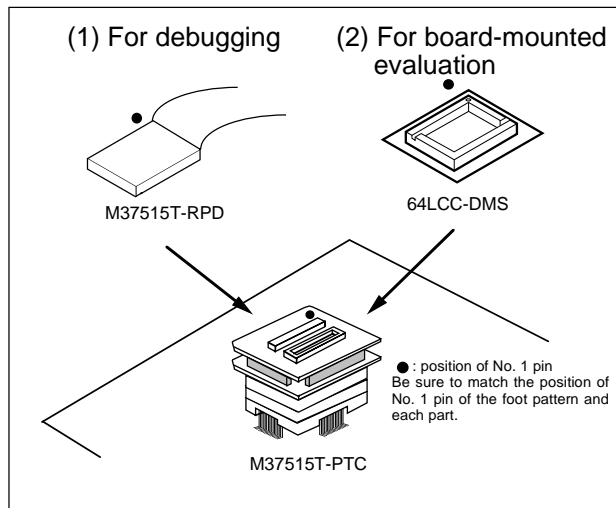


Figure 2 Usage of M37515T-PTC

## 4. Application (see Figure 2)

This product can be used during debugging and board-mounted evaluation in common.

### (1) For debugging

Mount TQPACK048SD on the target. On top of it, mount TQSOCKET048SDP and M37515T-PTC in that order. Then connect the probe of the emulation pod to the connector provided at the top of M37515T-PTC.

### (2) For board-mounted evaluation

Mount the 64-pin LCC MCU to 64LCC-DMS.

Before using M37530T-PTCB, be sure to read the precautions on page 4.

## 5. Connection Procedure (see Figure 3)

The connection procedure of M37515T-PTC is shown below.

- (1) Mount the TQPACK048SD.
- (2) Attach the TQSOCKET048SDP to the TQPACK048SD.
- (3) Attach the M37515T-PTC to the TQSOCKET048SDP.

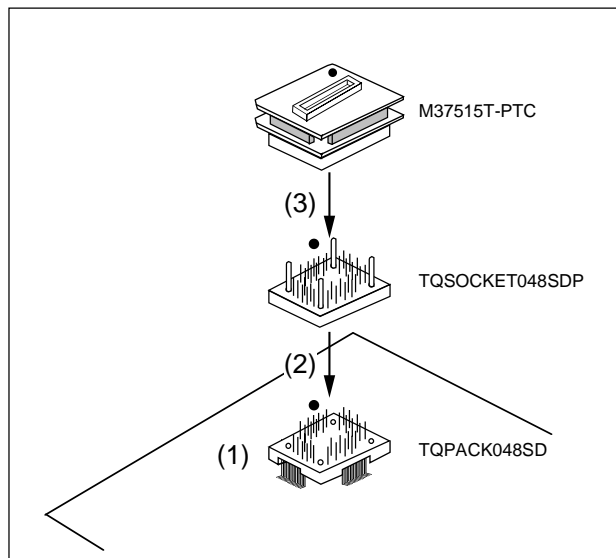


Figure 3 Connection procedure of M37515T-PTC

## 6. External Dimensions of M37515T-PTC

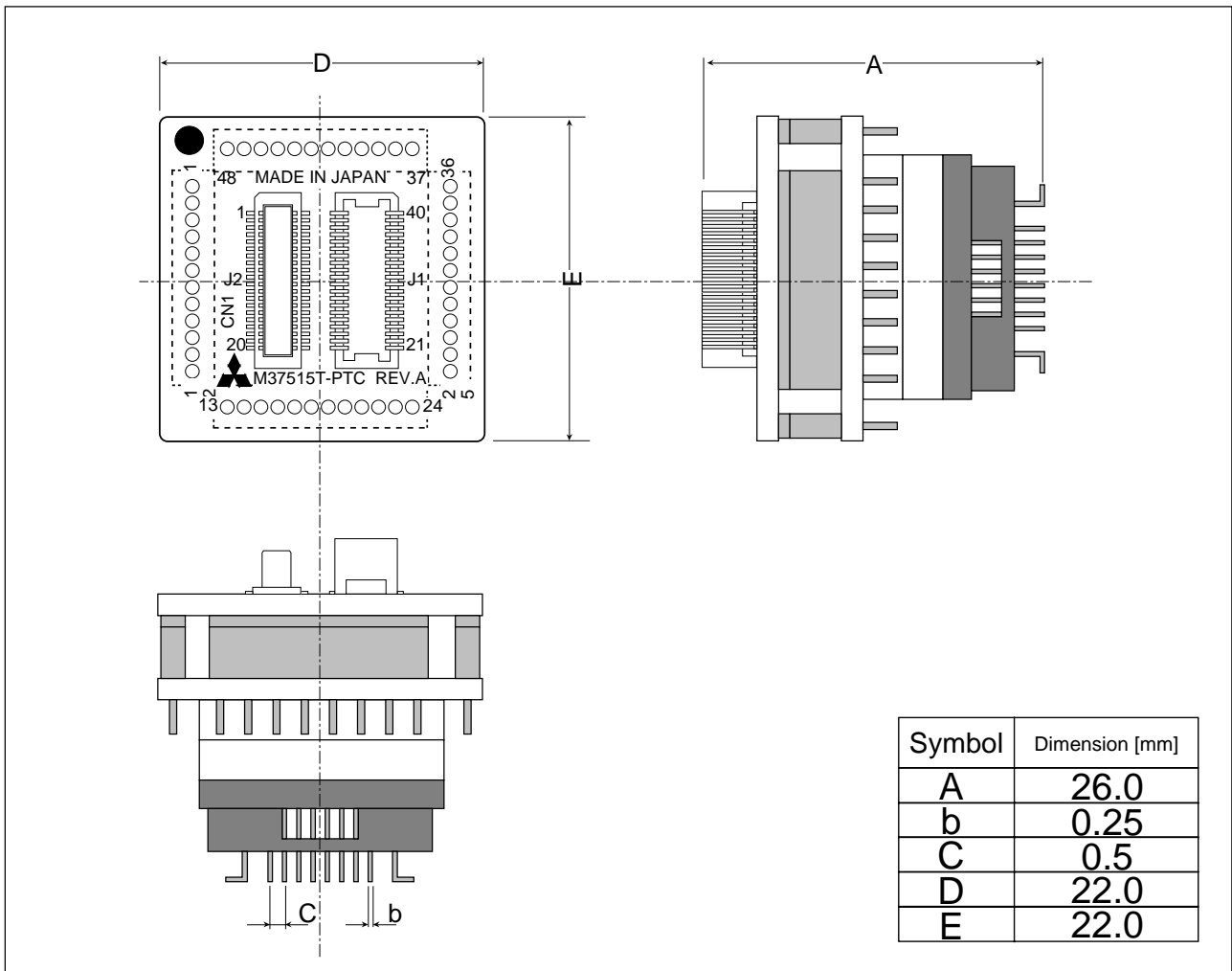


Figure 4 External dimensions of M37515T-PTC

## 7. Target Foot Pattern

Figure 5 shows the foot pattern for TQPACK made by Tokyo Eletech Corporation.

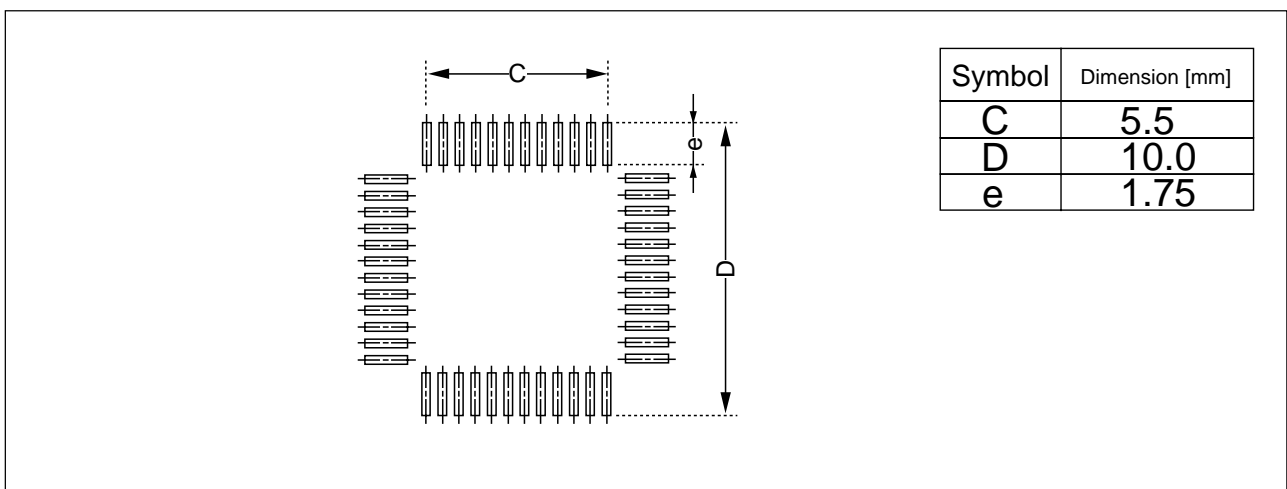



Figure 5 External dimensions of target system

## 8. Precautions

### CAUTION

Cautions To Be Taken for This Product:

-  • We cannot accept any request for repair.
- For purchasing TQPACK048SD and TQSOCKET048SDP, contact the following.

Tokyo Eletech Corporation

Phone: +81-3-5295-1661 Fax: +81-3-5295-1663

E-mail: info@tetc.co.jp URL: <http://www.tetc.co.jp/>

- For inquiries about the product or the contents of this manual, contact your local distributor.

Renesas Tools Homepage <http://www.renesas.com/tools>

## 9. Correspondence of Connectors J1, J2 and CN1

Table 2 lists the correspondence of connectors J1, J2 and CN1.

Table 2 Correspondence of connectors J1, J2 and CN1

| Connector pin No. | CN1 pin No. | Connector pin No. | CN1 pin No. | Connector pin No. | CN1 pin No. | Connector pin No. | CN1 pin No. |
|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|
| J1-1              | NC          | J1-21             | NC          | J2-1              | NC          | J2-21             | NC          |
| J1-2              | NC          | J1-22             | NC          | J2-2              | NC          | J2-22             | NC          |
| J1-3              | NC          | J1-23             | NC          | J2-3              | NC          | J2-23             | NC          |
| J1-4              | NC          | J1-24             | 24          | J2-4              | NC          | J2-24             | NC          |
| J1-5              | 37          | J1-25             | 25          | J2-5              | 2           | J2-25             | NC          |
| J1-6              | 38          | J1-26             | 26          | J2-6              | 3           | J2-26             | 14          |
| J1-7              | 39          | J1-27             | 27          | J2-7              | 4           | J2-27             | 15          |
| J1-8              | 40          | J1-28             | 28          | J2-8              | 5           | J2-28             | 16          |
| J1-9              | 41          | J1-29             | 29          | J2-9              | 6           | J2-29             | 17          |
| J1-10             | 42          | J1-30             | 30          | J2-10             | 7           | J2-30             | 18          |
| J1-11             | 19          | J1-31             | 31          | J2-11             | 8           | J2-31             | 43          |
| J1-12             | 20          | J1-32             | 32          | J2-12             | 9           | J2-32             | 44          |
| J1-13             | 21          | J1-33             | 33          | J2-13             | 10          | J2-33             | 45          |
| J1-14             | 22          | J1-34             | 34          | J2-14             | 11          | J2-34             | 46          |
| J1-15             | 23          | J1-35             | 35          | J2-15             | 12          | J2-35             | 47          |
| J1-16             | NC          | J1-36             | 36          | J2-16             | 13          | J2-36             | 48          |
| J1-17             | NC          | J1-37             | NC          | J2-17             | NC          | J2-37             | 1           |
| J1-18             | NC          | J1-38             | NC          | J2-18             | NC          | J2-38             | NC          |
| J1-19             | NC          | J1-39             | NC          | J2-19             | NC          | J2-39             | NC          |
| J1-20             | NC          | J1-40             | NC          | J2-20             | NC          | J2-40             | NC          |

(NC: not connected)

Note:

Some part numbers in this user's manual can be referred to as the following.

In this manual      Actual part number

64LCC-DMS   ->   M3T-64LCC-DMS